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Corrigendum

Corrigendum to “Improved formulation of travelling fires and application to concrete and steel structures” [Structures 3 (2015) 250–260]



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There have been minor errors and misprints discovered in the equations 3, 5, 10, 11, and 26 of the published article. The misprinted versions are as follows:

• Equation 5 should be revised as:

$$A_f = L \cdot L_t^* \cdot W \quad (5)$$

• Equation 10 should be revised as:

$$T_{max}(x, t) = T_{\infty} + \frac{5.38}{H} \left(\frac{LL_t^* W \dot{Q}}{|x + 0.5LL_t^* - \dot{x}_t|} \right)^{2/3} \quad (10)$$

• Equation 11 should be revised as:

$$T_{max}(x, t) = T_{nf}, \text{ if } \begin{cases} T_{ff} > T_{nf}; \\ |x + 0.5LL_t^* - \dot{x}_t| \leq 0.5LL_t^* \end{cases} \quad (11)$$

• Equation 26 should be revised as:

$$A_2 = \int_{r_{x2}}^{r_2} T_{max}(r) dr = \int_{r_{x2}}^{r_2} \left(T_{\infty} + 5.38 \left(\frac{\dot{Q}}{H} \right)^{2/3} \right) dr \\ = T_{\infty}(r_2 - r_{x2}) + \frac{16.14\dot{Q}^{2/3}}{H} (r_2^{1/3} - r_{x2}^{1/3}) \quad (26)$$

• Equation 19 and 23 should be revised as:

$$r_0 = \dot{Q} \left(\frac{5.38}{H(T_{nf} - T_{\infty})} \right)^{3/2} \quad (19) \text{ and } (23)$$

$$T_{max} - T_{\infty} = 5.38 \left(\frac{\dot{Q}}{H} \right)^{2/3} \quad (3)$$

$$A_f = L \cdot L_t^* \cdot W \cdot \dot{Q}'' \quad (5)$$

$$T_{max}(x, t) = T_{\infty} + \frac{5.38}{H} \left(\frac{LL_t^* W \dot{Q}''}{|x + 0.5LL_t^* - \dot{x}_t|} \right)^{2/3} \quad (10)$$

$$T_{max}(x, t) = T_{nf}, \text{ if } \begin{cases} T_{ff} > T_{nf}; \\ |x + 0.5LL_t^* - \dot{x}_t| \leq 0.5LL_t^* \end{cases} \quad (11)$$

$$A_2 = \int_{r_{x2}}^{r_2} T_{max}(r) dr = \int_{r_{x2}}^{r_2} \left(T_{\infty} + 5.38 \left(\frac{\dot{Q}}{H} \right)^{2/3} \right) dr \\ = T_{\infty}(r_2 - r_{x2}) + \frac{16.14\dot{Q}^{2/3}}{H} (r_2^{1/3} - r_{x2}^{1/3}) \quad (26)$$

$$r_0 = \left(\frac{5.38}{H(T_{nf} - T_{\infty})} \right)^{3/2} \quad (19) \text{ and } (23)$$

The corrected versions should be as follows:

• Equation 3 should be revised as:

$$T_{max} - T_{\infty} = 5.38 \frac{(\dot{Q}/r)^{2/3}}{H} \quad (3)$$

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Also, there has been an error noticed in one sentence in the Appendix B. "Using Alpert's correlation function [29] the **near-field** temperatures over a certain distance" should be corrected to "Using Alpert's correlation function [29] the **far-field** temperatures over a certain distance".